IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A device information generating device comprising:

a device key matrix storage unit configured to store a device key matrix in which device keys are arranged in a two dimensional manner;

a device key selecting unit configured to select device keys ~~according~~ corresponding to a device ID, which is formed of numerals each indicating a position of a device key in each one dimensional array of the device key matrix and indicates a path in a plurality of trees that are formed of all possible combinations of device keys in the device key matrix, and each device key being selected from device keys in the each one dimensional array ~~of the device key matrix~~ according to each numeral of [[a]] the device ID; and

a device information generating unit configured to generate [[a]] device information based on the selected device keys and the device ID.

Claim 2 (Currently Amended): The device information generating device according to claim 1, wherein the each numeral of the device ID corresponds to a row in each column of the device key matrix, and said device key ~~generating~~ selecting unit selects [[a]] the each device key ~~from the device keys~~ in ~~each row~~ the row of the each column of the device key matrix ~~according~~ corresponding to the each numeral of the device ID.

Claim 3 (Currently Amended): The device information generating device according to claim 1, wherein said device information generating unit calculates a path function value corresponding to one of a plurality of partial paths included in the path, ~~based on the selected device key, the path function indicating a path of the device ID in a tree formed of all~~

~~possible combinations of the numerals forming the device ID~~ based on each device key on one of the partial paths, to obtain a plurality of path function values corresponding to the partial paths respectively.

Claim 4 (Canceled).

Claim 5 (Withdrawn): A revoke control data generating device comprising:

a device key matrix storage unit configured to store a device key matrix in which device keys are arranged in a two dimensional manner;

a device key generating device configured to select one of the device keys in each one dimensional array of the device key matrix according to each numeral of a device ID;

an encrypting unit configured to encrypt the selected device keys by a master key; and

a revoke control data generating unit configured to generate revoke control data including an output of said encrypting unit and a path function indicating a path of the device ID to be revoked in a tree formed of all possible combinations of the numerals forming a device ID.

Claim 6 (Withdrawn): The revoke control generating device according to claim 5, wherein said device key generating device selects one of device keys in each row of the key matrix according to each numeral of the device ID.

Claim 7 (Withdrawn): A content utilizing device comprising:

a device information storing unit configured to store a device information including an arrangement of device keys and a device ID;

a key decrypting unit configured to receive revoke control data including encrypted

data keys which are encrypted by a master key and decrypt the encrypted data keys to obtain

the master key; and

a content decrypting unit configured to receive content data which is encrypted by the

data keys and decrypt the encrypted content data using the master key, wherein if the device

information is included in the received revoke control data, the content utilizing device is

revoked such that the key decrypting unit does not obtain the master key.

Claim 8 (Withdrawn): The content utilizing device according to claim 7, wherein

said revoke control data comprises a path function indicating a path of the device ID in a tree

formed of all possible combinations of the numerals forming the device ID.

Claim 9 (Currently Amended): A device information generating method comprising:

preparing a device key matrix in which device keys are arranged in a two dimensional

manner;

selecting ~~one of device keys in a device key matrix in which device keys are arranged~~

~~in a two dimensional manner in each one dimensional array of the device key matrix~~

~~according to each numeral of a device ID, wherein the selected device keys and the device ID~~

~~are the device information~~ device keys corresponding to a device ID which is formed of

numerals each corresponding to a position of a device key in each one dimensional array of

the device key matrix and indicates a path in a plurality of trees that are formed of all possible

combinations of device keys in the device key matrix, and each device key being selected

from device keys in the each one dimensional array according to each numeral of the device

ID; and

generating device information based on the selected device keys and the device ID.

Claim 10 (Currently Amended): The device information generating method according to claim 9, wherein ~~one of the device keys in each row of the device key matrix is selected according to each numeral of the device ID~~ the each numeral of the device ID corresponds to a row in each column of the device key matrix, and the selecting selects the each device key in the row of the each column of the device key matrix corresponding to the each numeral of device ID.

Claim 11 (Withdrawn): A device information generating method comprising:

selecting one of device keys in a device key matrix in which device keys are arranged in a two dimensional manner in each one dimensional array of the device key matrix according to each numeral of a device ID; and

calculating a path function value based on the selected device keys, the path function indicating a path of the device ID in a tree formed of all possible combinations of the numerals forming the device ID,

wherein path function value and the device ID are the device information.

Claim 12 (Withdrawn): The device information generating method according to claim 11, wherein one of the device keys in each row of the key matrix is selected according to each numeral of the device ID.

Claim 13 (Withdrawn): A revoke control data generating method comprising:

selecting one of device keys in a device key matrix in which device keys are arranged in a two dimensional manner in each one dimensional array of the device key matrix according to each numeral of a device ID;

encrypting the selected device keys by a master key; and

generating revoke control data including the encrypted-selected device keys and a

path function indicating a path of the device ID to be revoked in a tree formed of all possible

combinations of the numerals forming a device ID.

Claim 14 (Withdrawn): The revoke control generating method according to claim 13,

wherein one of the device keys in each row of the key matrix is selected according to each

numeral of the device ID.

Claim 15 (Withdrawn): A content utilizing method comprising:

receiving revoke control data including encrypted data keys which are encrypted by a

master key and decrypting the encrypted data keys to obtain the master key; and

receiving content data which is encrypted by data keys stored in a content utilizing

device and decrypting the encrypted content data using the master key, wherein if device

information formed of a device information including an arrangement of the device keys and

a device ID is included in the received revoke control data, the content utilizing device is

revoked such that the encrypted data keys are not decrypted.

Claim 16 (Withdrawn): The content utilizing method according to claim 15, wherein

said revoke control data comprises a path function indicating a path of the device ID in a tree

formed of all possible combinations of the numerals forming the device ID.

Claim 17 (Withdrawn): An article of manufacture comprising a computer usable

medium having computer readable program code means embodied therein, the computer

readable program code means comprising:

computer readable program code means for causing a computer to select one of

device keys in a device key matrix in which device keys are arranged in a two dimensional

manner in each one dimensional array of the device key matrix according to each numeral of

a device ID;

computer readable program code means for causing a computer to encrypt the

selected device keys by a master key; and

computer readable program code means for causing a computer to generate revoke

control data including the encrypted-selected device keys and a path function indicating a

path of the device ID to be revoked in a tree formed of all possible combinations of the

numerals forming a device ID.